Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) A method for producing a polymeric optical waveguide-forming master plate, comprising:

laying a thread which does not transmit rays used for subsequent exposure on a substrate for a master plate,

applying a positive resist material onto the substrate for the master plate to have a thickness such that, when parallel rays are vertically radiated onto the positive resist material from a side opposite to a substrate side with respect to the thread and then the positive resist material is developed, a layer made of the positive resist material is formed at whole space where the rays have not been radiated;

radiating parallel rays substantially vertically to the substrate for the master plate to expose the positive resist material to the rays; and

developing the exposed positive resist material on the substrate for the master plate to form a convex portion corresponding to a shape of an optical waveguide core.

2. (Original) A method for producing a polymeric optical waveguide-forming master plate according to claim 1, wherein the positive resist material is an ultraviolet ray-curable resin and the rays used for exposure are ultraviolet rays.

3. (Original) A method for producing a polymeric optical waveguide-forming master plate according to claim 1, wherein sectional areas of the thread change continuously in a longitudinal direction of the thread.

4. (Original) A method for producing a polymeric optical waveguide-forming master plate according to claim 1, wherein the substrate for the master plate has V-shaped grooves for positioning the thread.

5. (Original) A method for producing a polymeric optical waveguide-forming master plate according to claim 1, further comprising: electroforming at least once the substrate for the master plate having the formed convex portion.

6. (Original) A method for producing a polymeric optical waveguide, comprising:

preparing a mold having a concave portion for forming an waveguide core, the concave portion having a cross-section which has a shape in which a semicircle or a semiellipse is combined with a rectangle;

bringing a clad substrate into close contact with the mold so that the concave portion faces the clad substrate;

filling the concave portion of the mold brought into close contact with the clad substrate with a core-forming curable resin; and

curing the core-forming curable resin to form a core.

7. (Original) A method for producing a polymeric optical waveguide according to claim 6, wherein the concave portion has a tapered portion whose sectional areas change in a longitudinal direction of the concave portion.

8. (Currently Amended) A method for producing a polymeric optical waveguide ~~according to claim 6,~~ comprising:

preparing a mold having a concave portion for forming an waveguide core, the concave portion having a cross-section which has a shape in which a semicircle or a semiellipse is combined with a rectangle;

bringing a clad substrate into close contact with the mold so that the concave portion faces the clad substrate;

filling the concave portion of the mold brought into close contact with the clad substrate with a core-forming curable resin; and

curing the core-forming curable resin to form a core;

wherein the mold is prepared by applying a mold-forming curable resin onto a polymeric optical waveguide-forming master plate produced by a method of claim 1; curing the resin; and separating the cured resin layer from the polymeric optical waveguide-forming master plate.

9. (Original) A method for producing a polymeric optical waveguide according to claim 6, further comprising:

separating the mold from the clad substrate with the core; and

forming a clad layer on a surface of the clad substrate having the core.

10. (Original) A method for producing a polymeric optical waveguide, comprising:

preparing a polymeric optical waveguide-forming master plate, the polymeric optical waveguide-forming master plate having a convex portion which corresponds to an waveguide core and, as an outer layer thereof, a metal coating, the convex portion having a cross-section which has a shape in which a semicircle or a semiellipse is combined with a rectangle;

applying a clad-forming curable resin onto a clad substrate to form a resin layer;

pushing the convex portion of the polymeric optical waveguide-forming master plate against the resin layer;

curing the resin layer to form a cured resin layer having a concave portion corresponding to the convex portion of the polymeric optical waveguide-forming master plate;

separating the polymeric optical waveguide-forming master plate from the cured resin layer;

filling the concave portion of the cured resin layer with a core-forming curable resin;

curing the core-forming curable resin to form a core; and

forming a clad layer on a surface of the clad substrate having the core.

11. (Original) A method for producing a polymeric optical waveguide according to claim 10, wherein the convex portion has a tapered portion whose sectional areas change in a longitudinal direction of the convex portion.

12. (Original) A method for producing a polymeric optical waveguide according to claim 10, wherein the polymeric optical waveguide-forming master plate is produced by a method of claim 5.

13. (Original) An aperture changeable polymeric optical waveguide, comprising an optical waveguide core having cross-sections in which a semicircle or a semiellipse is combined with a rectangle, and a portion whose sectional areas change continuously in a longitudinal direction of the core.